

The Applicants having referenced a prior application, in the present application and having identified that the present application is a continuation-in-part of the prior application, do again request formal acknowledgement of Applicants' claim for domestic priority under 35 U.S.C. §120.

Responsive to the rejection of claims 1-3, 7-10 and 13 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,283,393 (Guginsky), Applicants have amended claims 1 and 10, and submit that claims 1-3, 7-10 and 13 are now in condition for allowance.

Guginsky discloses an armored flexible electrical conduit with fittings (Figs. 1 and 2) including a flexible hermetically tight metal conduit 11, a conduit connector female compression fitting 12 and a male tubular coupling 13. Fitting 12 and coupling 13 are coupled to conduit 11 in a hermetically sealed relationship. Fittings 12 and/or coupling 13 are also used to provide a conduit connection to an electrical junction box (column 2, lines 47-59). Female compression fitting 12 is provided with gland nut 27 which compresses a gland or gasket encircling a conduit inserted into female compression fitting 12 thereby clamping conduit 11 and effecting a hermetically tight coupling (column 3, lines 33-38). An insulation covered multiple conductor cable 29 traverses the length of conduit 11, fittings 12 and couplings 13 (column 3, lines 61-65).

In contrast claim 1, as amended, recites in part, “an electrical component ... solely hermetically sealing said tubing end.” (Emphasis added) Applicants submit that such an invention is neither taught, disclosed nor suggested by Guginsky or any of the other cited references, alone or in combination, and includes distinct advantages thereover.

Guginsky discloses the use of fittings 12 and couplings 13 to hermetically seal conduit 11 to another conduit 11 or an electrical junction box through which conductor cable 29 traverses. However, Guginsky does not teach or suggest an electrical component solely hermetically sealing

the tubing end, as recited in part by claim 1. Specifically, the hermetic sealing of an end of a tubing assembly, as in the Applicants' invention, is distinct from hermetically sealing a conduit to another conduit or a junction box, such as taught by Guginsky. Guginsky teaches electrical conductors being routed through conduit 11 after the hermetic seal is established. However, Applicants' invention solely hermetically seals the end of the tubing, thereby not allowing the routing of conductors after the seal is in place. Therein lies an advantage of Applicants' invention, that being a hermetic seal to an end of a tubing assembly, which provides environmental protection when unattached to any other assembly. In contrast, the conduit of Guginsky would not be hermetically sealed if unattached to another structure such as a conduit or electrical junction box. Accordingly, Applicants submit that claim 1, and claims 2-3 and 7-9 depending therefrom, are now in condition for allowance, which is hereby respectfully requested.

Additionally claim 7, recites in part, "said tubing including a non-smooth inner surface, said electrical component having an outer periphery which is in continuous intimate physical contact with said inner surface." (Emphasis added) Applicants submit that such an invention is neither taught, disclosed nor suggested by Guginsky or any of the other cited references, alone or in combination, and includes distinct advantages thereover.

Guginsky discloses the use of fittings 12 and couplings 13 to hermetically seal conduit 11 to another conduit 11 or an electrical junction box through which conductor cable 29 traverses. However, Guginsky but does not teach or suggest a tubing including a non-smooth inner surface, the electrical component having an outer periphery which is in continuous intimate physical contact with the inner surface, as recited in part by claim 7. The Examiner refers to Fig. 2 of Guginsky stating that the electrical connector has an outer periphery which is in continuous intimate physical contact with the inner surface of the tubing. However, Fig. 2 does not indicate

that the connector is in continuous intimate physical contact with conduit 11. Rather what is shown (referring additionally to Fig. 3) is a strap 26 presumably compressed onto cylindrical wall 18, but not onto annular flange 19, therefore the connector is not in continuous intimate physical contact with the outer or the inner surface of the tubing. Further, peripheral strap 26 tightly encircles and radially compresses the outer end border of conduit 11 to strap 26 abutting a peripheral head formed on fitting 12 (column 3, lines 29-32). Hence in Guginsky it is the inner periphery of the connector which comes into contact with the outer surface of the conduit, which is contrary to what is claimed in claim 7, wherein a tubing including a non-smooth inner surface, the electrical component having an outer periphery which is in continuous intimate physical contact with the inner surface. Accordingly, Applicants submit that claim 7, and claim 8 depending therefrom, are now in condition for allowance, which is hereby respectfully requested.

Additionally claim 10, as amended, recites in part, “an electrical connector ... solely hermetically sealing said tubing end.” (Emphasis added) Applicants submit that such an invention is neither taught, disclosed nor suggested by Guginsky or any of the other cited references, alone or in combination, and includes distinct advantages thereover.

Guginsky discloses the use of fittings 12 and couplings 13 to hermetically seal conduit 11 to another conduit 11 or an electrical junction box through which conductor cable 29 traverses. However, Guginsky but does not teach or suggest an electrical connector solely hermetically sealing the tubing ends, as recited in part by claim 10. Specifically, the hermetic sealing of the ends of a tubing assembly, as in the Applicants’ invention, is distinct from hermetically sealing a conduit to another conduit or a junction box, such as taught by Guginsky. Guginsky teaches electrical conductors being routed through conduit 11 after the hermetic seal is established. However, Applicants’ invention hermetically seals the end of the tubing not allowing the routing

of conductors after the seal is in place. Therein lies an advantage of Applicants' invention, that being a hermetic seal to an end of a tubing assembly, which provides environmental protection when unattached to any other assembly. In contrast, the conduit of Guginsky would not be hermetically sealed if left unattached to another conduit or electrical junction box. Accordingly, Applicants submit that claim 10, and claim 13 depending therefrom, are now in condition for allowance, which is hereby respectfully requested.

Claims 4-6 and 11-12 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Guginsky in view of U.S. Patent No. 4,701,574 (Shimirak et al.). However, claims 4-6 depend from claim 1, and claims 11-12 depend from claim 10, and claims 1 and 10 have been placed in condition for allowance for the reasons given above. Accordingly, Applicants submit that claims 4-6 and 11-12 are now in condition for allowance, which is hereby respectfully requested.

Responsive to the rejection of claims 14-17 under 35 U.S.C. § 103(a) as being unpatentable over Guginsky in view of Shimirak et al. Applicants have amended claim 14, and submit that claims 14-17 are now in condition for allowance.

Guginsky is described above.

Shimirak et al. disclose a cable sealing apparatus including a gel 16 made of either a urethane, silicone or a non-silicone liquid rubber (column 3, lines 5-8). Gel 16 allows the passage of a cable therethrough so that an end seal 12, 14, 60, 61, 62 and 65 can be formed for the cable when it passes through gel 16 (column 3, lines 23-29). End seals 12, 14, 60, 61, 62 and 65 do allow water to pass thereby (column 5, lines 35-40). Further, the figures illustrate cuts along the lengths of tubing 18.

In contrast claim 14, as amended, recites in part:

a plug solely hermetically sealing said tubing end, said at least one electrical conductor extending through and sealed with said plug.

(Emphasis added) Applicants submit that such an invention is neither taught, disclosed nor suggested by Guginsky or Shrimplin et al. or any of the other cited references, alone or in combination, and includes distinct advantages thereover.

Guginsky discloses the use of fittings 12 and 13 to hermetically seal conduit 11 to another conduit 11 or an electrical junction box through which conductor cable 29 traverses. Shimirak et al. disclose a cable sealing apparatus including end seals 12, 14, 60, 61, 62 and 65 that allow water to pass thereby (column 5, lines 35-40). However, neither Guginsky nor Shimirak et al. alone or in combination with any other cited reference disclose, teach or suggest a plug solely hermetically sealing the tubing end, with at least one electrical conductor extending therethrough and sealed with the plug, as recited in part by claim 14. Contrary to the Examiner's contention that Shimirak et al teaches a plug hermetically sealing a tube, Shimirak et al speaks of water migration within the tubing. As such, the Examiner's contention that Shimirak et al teaches a plug that hermetically seals tubing is not supported by the disclosure. Accordingly, Applicants submit that claim 14, and claims 15-17 depending therefrom, are now in condition for allowance, which is hereby respectfully requested.

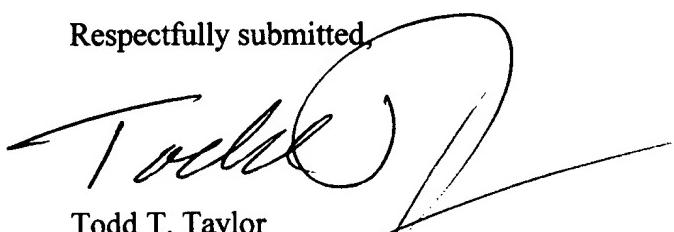
For the foregoing reasons, Applicants submit that no combination of the cited references teaches, discloses or suggests the subject matter of the amended claims. The pending claims are therefore in condition for allowance, and Applicants respectfully request withdrawal of all rejections and allowance of the claims.

In the event Applicants have overlooked the need for an extension of time, an additional extension of time, payment of fee, or additional payment of fee, Applicants hereby conditionally

petition therefor and authorizes that any charges be made to Deposit Account No. 20-0095,  
TAYLOR & AUST, P.C.

Should any question concerning any of the foregoing arise, the Examiner is invited to  
telephone the undersigned at (260) 897-3400.

Respectfully submitted,



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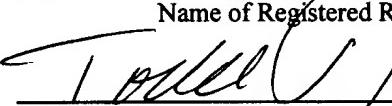
Attorney for Applicant

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Title: ELECTRIC TUBING ASSEMBLY WITH HERMATICALLY SEALED ENDS  
Application Serial No.: 09/859,718      Group: 2831      Examiner: D. Patel



ATTACHMENT A:  
MARKED-UP COPY SHOWING AMENDMENTS

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IN THE CLAIMS

1. (Amended) An electrical assembly, comprising:

at least one electrical conductor;

a flexible electrical tubing having an end, said tubing loosely carrying said at least one electrical conductor therein; and

an electrical component associated with said at least one electrical conductor, said electrical component solely hermetically sealing said tubing end.

10. (Amended) An electrical assembly, comprising:

at least one electrical conductor;

a flexible electrical tubing having an end, said tubing loosely carrying said at least one electrical conductor therein; and

an electrical connector having at least one electrical terminal, each said terminal connected with a corresponding said electrical conductor, said electrical connector ~~solely~~ hermetically sealing said tubing end.

14. (Amended) An electrical assembly, comprising:

at least one electrical conductor;

a flexible electrical tubing having an end, said tubing loosely carrying said at least one electrical conductor therein; and

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Title: ELECTRIC TUBING ASSEMBLY WITH HERMATICALLY SEALED ENDS  
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a plug solely hermetically sealing said tubing end, said at least one electrical conductor extending through and sealed with said plug.